- 20. Small amounts of chyme enter the small intestine at a time
- 21. The acidic chyme stimulates the small intestine to release secretin
- 22. Secretin targets pancreas to release bicarbonate to increase pH
- 23. Digestion of carbs and proteins continues in the small intestine
- High blood glucose levels target the pancreas to release insulin
- a. Insulin circulates in the blood and promotes the cells to uptake glucose for metabolic activity
- Liver stores excess glucose as glycogen b.
- Blood glucose level drops C.
- Pancreas secretes glucagon d.
- Glucagon circulates in blood e.
- Glucagon breaks down glycogen in liver f.
- Glucose is released into blood g.
- h. Glucose level rises

i.

ii.

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- 24. Mucosal epithelial cells produce small peptidases that cleave small peptides into absorbable amino acids
- 25. Mucosal epithelial cells also produce carbohydrases
- 26. Epithelium absorbs these nutrients
- 27. Fat in the duodenum epithelium stimulates the release of CCK
- 28. Full fat cells stimulate the release of leptin which targets the brain to make you 29. CCK targets the pancreas to release digestive entry es **CO** creted through pancreatic duct ns common bile duct pincter between duct and ducdow **CO** feel full
- Secreted through pancreatic duct
- Joins common bile duct
- Sphincter between duct and duodenuit
- Digestive enzymes enter an all in estine 30. CCK targets the canoradder to contract
 - 31. Gailled a contraction care collero squeeze out through the cystic duct to the
 - 32. Sphincter at junction of common bile duct and small intestine relaxes in response to waves of peristalsis
 - 33. Bile squirts into duodenum
 - 34. Bile emulsifies fat \rightarrow micelle
- Allows for greater surface area to be exposed to lipases
 - 35. Lipases break down micelles
 - Triglycerides are hydrolyzed into diglycerides, monoglycerides, and fatty acids
- Lipid soluble = able to pass through plasma membranes into the cells of the small a. intestine epithelium
 - 36. In the small intestine cells, the broken down fats are resynthesized into triglycerides
 - Triglyceride + cholesterol + phospholipid = chylomicron
 - Water soluble
 - 37. Chylomicrons pass into blind ended lymph vessels called lacteals that are in each villus by exocytosis
 - 38. Chylomicrons flow through the lymphatic system and enter the bloodstream by the thoracic ducts
 - 39. Most absorption of nutrients happens in ileum and jejunum
 - 40. Bile salts from the micelles are absorbed into ileum and returned to the liver through the bloodstream
 - 41. Lipids from chylomicrons are stored as triglycerides or used to make lipoproteins